

## **TIMING CONTROLS**

**Time Delay Relays**

**Interval Timers**

**Automatic Reset Timers**

**Cycle Timers**

**Percentage Timers**

**Running Time Meters**

**Relay Controls**

**Program Clocks**

**Time Switches**

# **ZENITH**

## **AUTOMATIC CONTROL EQUIPMENT**



**ZENITH ELECTRIC COMPANY**

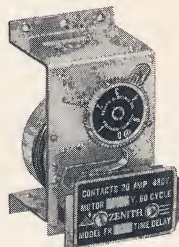
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Bulletin D 963

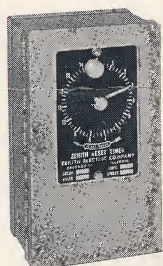


# Timing Controls . . . by ZENITH

## TIME DELAY RELAYS



Model FR



Model AZC  
MZY, MZY  
ZM

The Zenith motor driven time delay relays are available in adjustable time ranges from 13½ seconds to 550 seconds. Designed to operate circuit at end of preset time. This is adjustable by means of a

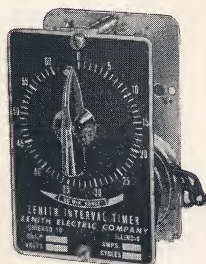
calibrated dial. Timers operate from maintained pilot contact. Upon opening of the maintained pilot contact, timer resets to original position.

### MODEL FR

The Zenith FR time delay relay is a compact, precise, yet inexpensive timing unit ideal for use in control panels. The time setting is easily adjusted by moving the indicator arm around the notched dial. No tools are required for time setting. The dial has 60 divisions and is numbered every tenth division for ease of setting. Elapsed time can be viewed during operation of timer.

Model No.	Timing Ranges	Contacts	Electrical Ratings	Pilot Control	Dimensions (in.) open type			Weight (lbs.)
					H	W	D	
FR	15 sec., 30 sec., 60 sec. 2m, 5m, 10m	SPDT	15A, 250V non-inductive	maintained	3¾	2¼	2¾	1
AZC	15 sec., 30 sec., 60 sec. 2m	SPDT	10A, 250V non-inductive	maintained	4½	3	2¾	1¼
MZY, MZY	5m, 10m	SPNO (MZY) SPNC (MZY)	8A, 250V	maintained	5½	3	2¾	1½
ZM	15 min., 30 min., 60 min. 2H, 5H, 10H	SPDT	10A, 250V	maintained	7	4	2	2

## INTERVAL TIMERS • manually set



Model 400

The Zenith Interval Timer is designed to open or close a circuit for a manually selected time interval. The setting pointer is directly connected to the switch operating cam. The unit does not set through a clutch, thus assuring positive switch action. Calibrated dial settings in ranges

from 1 minute to 120 hours. Available open type for panel mounting or enclosed type for external mounting. Also available with indicating and control accessories such as ON-OFF toggle switch, pilot light and signal buzzer.

Model No.	Timing Ranges	Contacts	Electrical Ratings	Pilot Control	Dimensions (in.) open type			Weight (lbs.)
					H	W	D	
400	Minutes: 1, 6, 15, 30 Hours: 1, 2, 5, 6, 10 20, 24, 60 72, 120	SPDT	10A, 250V	manual	4½	2⅞	2	1¼

## INTERVAL TIMERS • automatic reset



Model MZC, MZO  
ZC, ZO

The Zenith automatic Reset Interval Timer is designed to control a circuit during a preset time when energized by a push button or other remote momentary contact. At the end of the preset time, circuit

opens and timer automatically resets to original starting point. Calibrated dial settings in ranges from 13½ seconds to 24 hours. Unit always resets to original time setting for precise repeat accuracy.

Model No.	Timing Ranges	Contacts	Electrical Ratings	Pilot Control	Dimensions (in.) open type			Weight (lbs.)
					H	W	D	
MZC, MZO	15 sec., 30 sec., 60 sec. 2 min., 5 min., 10 min.	SPNO (MZC) SPNC (MZO)	8A, 250V	momentary	5½	3	2¾	1½
ZC, ZO	15 min., 30 min., 60 min. 2H, 5H, 10H	SPNO (ZC) SPNC (ZO)	10A, 250V	momentary	7	4	2	2



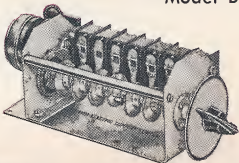


## AUTOMATIC CONTROL EQUIPMENT

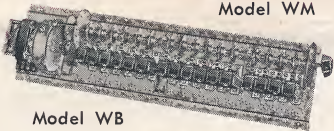
### CYCLE TIMERS



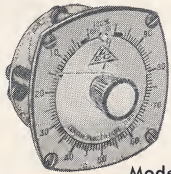
Model B-1



Model WM



Model WB



Model CP

The Zenith cycle timers are designed to continuously open and close an electrical circuit according to a preset schedule.

They are available to control one to an unlimited number of circuits. Any timing cycle is available.

Model No.	Electrical Rating	No. of Circuits	Dimensions open type (inches)			Weight (lbs.)
			H	W	D	
<b>B-1</b>	15A, 250V non-inductive	1	3 $\frac{3}{4}$	2 $\frac{1}{8}$	2 $\frac{3}{4}$	1
<b>WM</b>	15A, 250V non-inductive	2-4	3 $\frac{1}{16}$	5 $\frac{1}{2}$	2 $\frac{7}{8}$	2
		5-7	3 $\frac{1}{16}$	7 $\frac{3}{8}$	2 $\frac{7}{8}$	3
<b>WB</b>	15A, 250V non-inductive	2-100 or more	ON APPLICATION			

The model CP percentage timer is a single circuit repeat cycle timer that is dial adjusted for ON time by percentage

of total time cycle. Design concepts featured in this new model provide extreme accuracy and reliability.

Model No.	Electrical Rating	Time Ranges	Dimensions (inches)				Weight (lbs.)
			Plate		Body		
			H	W	OD	D	
CP	15A, 250V	Seconds 4, 15, 30, 60 Minutes 5, 15, 30, 60 Hours 2, 6, 12, 24	3 <sup>3</sup> / <sub>8</sub>	3 <sup>3</sup> / <sub>8</sub>	2 <sup>7</sup> / <sub>8</sub>	2 <sup>5</sup> / <sub>8</sub>	1

### RUNNING TIME METERS

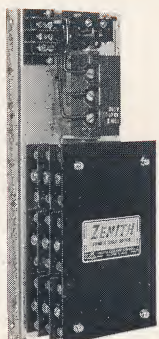


Model ETC

The Zenith Model ETC running time meter records the operating time of any machine or equipment powered by alternating current. The meter is engineered to withstand hard usage, normal vibration and shock, and is ruggedly built of the best materials and assembled by skilled precision instrument makers. The motor is specially designed for this particular

instrument and all pivots in the mechanism are designed to prevent breakage and to assure long life. The mechanism is totally enclosed and is sealed against the entrance of dust and moisture. The unit is not resettable. Records up to 99999.9 hours with minimum reading of 1/10 hour. Dimensions; Bezel diameter, 2.69"; case diam., 2.10"; overall depth, 2.94".

### RELAY CONTROLS



Model EM, MM

The Zenith multipole relay can be furnished in any number of designated circuits. They are available for either electrically held (Model EM) or mechanically latched (Model MM) operation. Switches are of the SPDT snap action type actuated

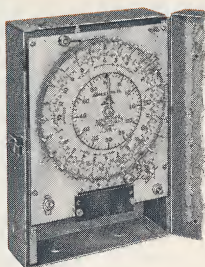
by a common operating shaft. Units available from 2 to 84 circuits, each rated 20 amp. 480 volt non-inductive. Control of many lighting circuits or switching of a bank of solenoid valves are among the many applications of the unit.





## AUTOMATIC CONTROL EQUIPMENT

### PROGRAM CLOCKS



Model P5-24C, PD5-24C

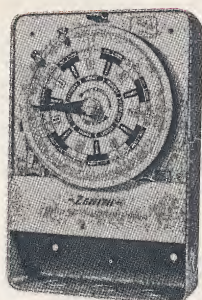
The Zenith program clocks are electrical controls designed to operate precise short duration signals on a predetermined schedule over a set reference period of 24 hours. They are used to ring bells in schools and factories and for split second timing control of industrial operations.

Model No.	Electrical Rating	Contact Arrangement	Dial	Minimum Interval Between Settings	Circuit Closing Range	Dimensions (inches)			Weight (lbs.)
						H.	W.	D.	
P5-24C	6A, 115V 3A, 230V	SPNO	24 Hour	5 Minutes	2-60 sec.	12	8	4 1/2	10
PD5-24C	6A, 115V 3A, 230V	DPNO	24 Hour	5 Minutes	2-60 sec.	12	8	4 1/2	10

### TIME SWITCHES



Model 2496



Model 9708

Model 5000

The Zenith time switches are electrical timing controls designed to operate definite ON-OFF periods on a predetermined schedule over a set reference period of 24 hours or seven days.

Model No.	Electrical Rating	Contact Arrangement	Dial	Minimum Interval Between Settings	Circuit Closing Range	Dimensions (inches)			Weight (lbs.)
						H.	W.	D.	
2496	20A, 480V	SPDT	24 Hour	15 Minutes	15 Min. to 24 Hrs.	9 1/2	5 1/2	3 1/2	5
5000	40A, 250V	SPST DPST SPDT	24 Hour	2 1/2 Hours		7 3/4	4 1/8	3	4
9708	40A, 250V	DPDT	7 day	3 Hours		10 7/8	7 3/8	3 5/8	6 1/2

### OTHER PRODUCTS

- Automatic transfer switches
- Magnetic contactors
- Mechanically held contactors

- Laundry machinery controls
- Ground detectors for Hospital operating rooms
- Irrigation timers

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